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Equivalent
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pitman [ENG] 1. A worker in or near a pit, a
in a quarry, mine, garage, or foundry. 2. On

vacuum pencil

vacuum pencil [ENG] A pencil-like length of tubing connected to a small vacuum pump, for picking up semiconductor slices or chips during fabrication of solid-state devices. { 'vak-yəm ,pen-səl }

vacuum pump [MECH ENG] A compressor for exhausting air and noncondensable gases from a space that is to be maintained at subatmospheric pressure. { 'vak-yəm ,pʌmp }

vacuum relief valve [ENG] A pressure relief device which is designed to allow fluid to enter a pressure vessel in order to avoid extreme internal vacuum. { 'vak-yəm ri'leɪf ,vɒlv }

vacuum shelf dryer [ENG] A type of indirect batch dryer which generally consists of a vacuum-tight cubical or cylindrical chamber of cast iron or steel plate, heated supporting shelves inside the chamber, a vacuum source, and a condenser; used extensively for drying pharmaceuticals, temperature-sensitive or easily oxidizable materials, and small batches of high-cost products where any product loss must be avoided. { 'vak-yəm 'shelf,dri'ər }

vacuum support [MECH ENG] That portion of a rupture disk device which prevents deformation of the disk resulting from vacuum or rapid pressure change. { 'vak-yəm sə,pɔrt }

vacuum-tube voltmeter [ENG] Any of several types of instrument in which vacuum tubes, acting as amplifiers or rectifiers, are used in circuits for the measurement of alternating-current or direct-current voltage. Abbreviated VTVM. Also known as tube voltmeter. { 'vak-yəm 'tüb ,vɒlt,mēd'ər }

vacuum-type insulation [CHEM ENG] Highly reflective double-wall structure with high vacuum between the walls; used as insulation for cryogenic systems; Dewar flasks have vacuum-type insulation. { 'vak-yəm 'tɪp in-sə'leɪ-shən }

VAD See vapor-phase axial deposition. { vad ər ,vɛ,'æd'ə }

valley [BUILD] An inside angle formed where two sloping sides intersect. { 'væl-ē }

valley rafter [BUILD] A part of the roof frame that extends diagonally from an inside corner plate to the ridge board at the intersection of two roof surfaces. { 'væl-ē ,raf-tər }

valley roof [BUILD] A pitched roof with one or more valleys. { 'væl-ē ,rūf }

value analysis See value engineering. { 'væl-yü ə,næl-'ə-səs }

value control See value engineering. { 'væl-yü kən,troʊl }

value engineering [IND ENG] The systematic application of recognized techniques which identify the function of a product or service, and provide the necessary function reliably at lowest overall cost. Also known as value analysis; value control. { 'væl-yü ,en-jə,nir-ig }

value theory [SYS ENG] A concept normally associated with decision theory; it strives to evaluate relative utilities of simple and mixed parameters which can be used to describe outcomes. { 'væl-yü ,thē-ə-rē }

valve See electron tube. [MECH ENG] A device

used to regulate the flow of fluids in piping systems and machinery. { 'vɒlv }

valve follower [MECH ENG] A linkage between the cam and the push rod of a valve train. { 'vɒlv ,fɒl-'ə-wər }

valve guide [MECH ENG] A channel which supports the stem of a poppet valve for maintenance of alignment. { 'vɒlv ,ɡaɪd }

valve head [MECH ENG] The disk part of a poppet valve that gives a tight closure on the valve seat. { 'vɒlv ,hed }

valve-in-head engine See overhead-valve engine. { 'vɒlv in-'hed 'en-jən }

valve lifter [MECH ENG] A device for opening the valve of a cylinder as in an internal combustion engine. { 'vɒlv ,lif-tər }

valve positioner [CONT SYS] A pneumatic servomechanism which is used as a component in process control systems to improve operating characteristics of valves by reducing hysteresis. Also known as pneumatic servo. { 'vɒlv pə'zɪʃən-ər }

valve seat [DES ENG] The circular metal ring on which the valve head of a poppet valve rests when closed. { 'vɒlv ,set }

valve stem [MECH ENG] The rod by means of which the disk or plug is moved to open and close a valve. { 'vɒlv ,stem }

valve train [MECH ENG] The valves and valve-operating mechanism for the control of fluid flow to and from a piston-cylinder machine, for example, steam, diesel, or gasoline engine. { 'vɒlv ,træn }

van der Waals surface tension formula [THERMO] An empirical formula for the dependence of the surface tension on temperature: $\gamma = Kp^{2/3}T^{1/2}(1 - T/T_c)^n$, where γ is the surface tension, T is the temperature, T_c and p_c are the critical temperature and pressure, K is a constant, and n is a constant equal to approximately 1.23. { 'væn dər ,wɒlz 'sər-fəs ,ten-tʃən ,fɔr-myə-'lə }

Van Dorn sampler [ENG] A sediment sampler that consists of a Plexiglas cylinder closed at both ends by rubber force cups; in the armed position the cups are pulled outside the cylinder and restrained by a releasing mechanism, and after the sample is taken, a length of surgical rubber tubing connecting the cups is sufficiently prestressed to permit the force cups to retain the sample in the cylinder. { væn 'dɔrn ,səm-plər }

vane [MECH ENG] A flat or curved surface exposed to a flow of fluid so as to be forced to move or to rotate about an axis, to rechannel the flow, or to act as the impeller; for example, in a steam turbine, propeller fan, or hydraulic turbine. { væn }

vane anemometer [ENG] A portable instrument used to measure low wind speeds and airspeeds in large ducts; consists of a number of vanes radiating from a common shaft and set to rotate when facing the wind. { 'væn ən-'ə-mē-tər }

vane motor rotary actuator [MECH ENG] A type of rotary motor actuator which consists of a rotor with several spring-loaded sliding vanes in an elliptical chamber; hydraulic fluid enters the

chamber and forces the vanes to move to the outlets. { 'væn fr 'æk-ʃə,wād-ər }

vane-type instrument [ENG] A instrument utilizing the force of repulsion between fixed and movable magnetized vanes; the force existing between a coil and a shaped piece of soft iron, to move a pointer. { 'væn ,tɪp ,in-strə-mənt }

vapor [THERMO] A gas at a temperature above the critical temperature, so that it cannot be liquefied by compression, without liquefaction. { 'væ-pər }

vapor barrier [CIV ENG] A layer applied to the inner (warm) surface of a wall or floor to prevent absorption of moisture. { 'væ-pər ,bɪ-ri-ər }

vapor-compression cycle [MECH ENG] A refrigeration cycle in which refrigerant is compressed through a machine which allows boiling (or vaporization) of liquid; it passes through an expansion valve producing a cooling effect in the space being cooled, followed by compression of the refrigerant. { 'væ-pər kəm'presh-ən ,saɪ-kəl }

vapor cycle [THERMO] A thermodynamic cycle operating as a heat engine or a refrigerator in which the working substance changes through the vapor state. { 'væ-pər ,saɪ-kəl }

vapor degreasing [ENG] A type of cleaning procedure for metals to remove greasy or lightly attached solids; a solvent such as roethylene is boiled, and its vapor is condensed on the metal surface. { 'væ-pər ,di'greɪ-sɪŋ }

vapor-filled thermometer [ENG] A thermometer filled with a temperature measuring liquid; moves or distorts in response to changes in induced pressure changes from expansion or contraction of the sealed chamber. { 'væ-pər ,fɪld θər'mi-ɪtər }

vaporimeter [ENG] An instrument used to measure a substance's vapor pressure or that of an alcoholic liquid, in order to determine its alcohol content. { 'væ-pər-ɪ-mi-ter }

vaporization See volatilization.

vaporization coefficient [THERMO] A coefficient that relates the rate of vaporization of a substance at a given temperature and constant pressure to the rate of vaporization of the same substance at a reference temperature and pressure; necessary to produce the same rate of vaporization at this temperature if every vaporizing substance is the solid or liquid were. { 'væ-pər-ɪ-zə'shən ,kə-ə-'fɪʃ-ən }

vaporization cooling [ENG] A process of cooling a nonflammable liquid by boiling point and high dielectric liquid is flowed or sprayed over equipment in an enclosure which carries the heat to the enclosures, or heat exchanger. Also known as evaporative cooling. { 'væ-pər-ɪ-zə'shən ,kʊl-ɪŋ }

vaporizer [CHEM ENG] A process in which a liquid is heated until it